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(54) Title: PHTHALOCYANINES AND THEIR USE IN INK-JET PRINTERS

$$MPc \underbrace{(SO_{3}H)_{x}}_{(SO_{2}NR^{1}R^{2})_{y}}$$

$$(SO_{2}NR^{3}R^{4})_{z}$$

$$(SO_{2}NR^{3}R^{4})_{z}$$

(57) Abstract: A composition comprising: (a) a major dye component which is a mixture of phthalocyanine dyes of Formula (1) and salts thereof: wherein: M is Cu or Ni; PC represents a phthalocyanine nucleus of formula (a); R¹ and R² independently are H or optionally substituted C₁₄alkyl; R³ is H or optionally substituted hydrocarbyl; and R⁴ is optionally substituted hydrocarbyl; or R³ and R⁴ together with the nitrogen atom to which they are attached represent an optionally substituted aliphatic or aromatic ring system; x is 0.1 to 3.8; y is 0.1 to 3.8; z is 0.1 to 3.8; the sum of (x+y+z) is 4; and the substituents, represented by x, y and z, are attached only to a β-position on the phthalocyanine ring; and (b) a liquid medium which comprises water and an organic solvent or an organic solvent free from water. Also novel dyes, ink-jet printing processes, printed images, and cartridges.